

Claims

Sub A1 7

1. An isolated, pesticidal protein wherein said protein comprises a pesticidal fragment of the full-length *Cry6A* toxin of SEQ ID NO:2, wherein said protein has a molecular weight between approximately 34 kDa and approximately 50 kDa.
2. The protein of claim 1 wherein said protein has a molecular weight of approximately 40-48.7 kDa.
- Sub A2 3. The protein of claim 1 wherein said protein consists of a pesticidal fragment of the full-length *Cry6A* toxin of SEQ ID NO:2.
4. The protein of claim 1 wherein said protein comprises the amino acid sequence of SEQ ID NO:6 or a pesticidal fragment of SEQ ID NO:6.
- Sub A3 5. The protein of claim 1 wherein said protein consists of the amino acid sequence of SEQ ID NO:6 or a pesticidal fragment of SEQ ID NO:6.
6. The protein of claim 1 wherein said protein comprises an amino acid segment of SEQ ID NO:2 from approximately amino acid 11 to approximately amino acid 443 of SEQ ID NO:2.
7. The protein of claim 1 wherein said protein consists of an amino acid segment of SEQ ID NO:2 from approximately amino acid 11 to approximately amino acid 443 of SEQ ID NO:2.
- Sub A4 8. The protein of claim 1 wherein said protein comprises the amino acid sequence of SEQ ID NO:8.

9. The protein of claim 1 wherein said protein consists of an amino acid segment of SEQ ID NO:2 from approximately amino acid 11 to approximately amino acid 390 of SEQ ID NO:2.

- Sub A5 10. A method of controlling a coleopteran pest wherein said method comprises contacting said pest with an isolated, pesticidal protein wherein said protein comprises a pesticidal fragment of the full-length *Cry6A* toxin of SEQ ID NO:2, wherein said protein has a molecular weight between approximately 34 kDa and approximately 50 kDa.

11. The method of claim 10 wherein said protein has a molecular weight of approximately 40-48.7 kDa.

- Sub A6 12. The method of claim 10 wherein said protein consists of a pesticidal fragment of the full-length *Cry6A* toxin of SEQ ID NO:2.

13. The method of claim 10 wherein said protein comprises the amino acid sequence of SEQ ID NO:6 or a pesticidal fragment of SEQ ID NO:6.

- Sub A7 14. The method of claim 10 wherein said protein consists of the amino acid sequence of SEQ ID NO:6 or a pesticidal fragment of SEQ ID NO:6.

15. The method of claim 10 wherein said protein comprises an amino acid segment of SEQ ID NO:2 from approximately amino acid 11 to approximately amino acid 443 of SEQ ID NO:2.

16. The method of claim 10 wherein said protein consists of an amino acid segment of SEQ ID NO:2 from approximately amino acid 11 to approximately amino acid 443 of SEQ ID NO:2.

Sub A 8 7

17. The method of claim 10 wherein said protein comprises the amino acid sequence of SEQ ID NO:8.
18. The method of claim 10 wherein said protein consists of an amino acid segment of SEQ ID NO:2 from approximately amino acid 11 to approximately amino acid 390 of SEQ ID NO:2.
19. The method of claim 10 wherein said protein is produced by and present in a plant.
20. An isolated polynucleotide that encodes a protein of claim 1.
21. A transgenic microbial or plant cell comprising a polynucleotide of claim 20.